Acoustile

THE PERFECTOR OF ACOUSTICS

Acoustile

THE PERFECTOR OF ACOUSTICS

Insures perfect acoustics (conditions for hearing), if specified and installed during construction of buildings.

Corrects acoustical defects in existing buildings.

Eliminates undesirable noise and makes interiors quiet (whether the noise originates within, or comes from the outside).

Conforms to any style of decoration and can be painted as desired (we maintain an expert decorating department).

Can be used in place of plaster, if specified in advance of construction, or applied over any surface in correction work.

Is easily installed by competent contractors. We do the engineering and provide supervision where required.

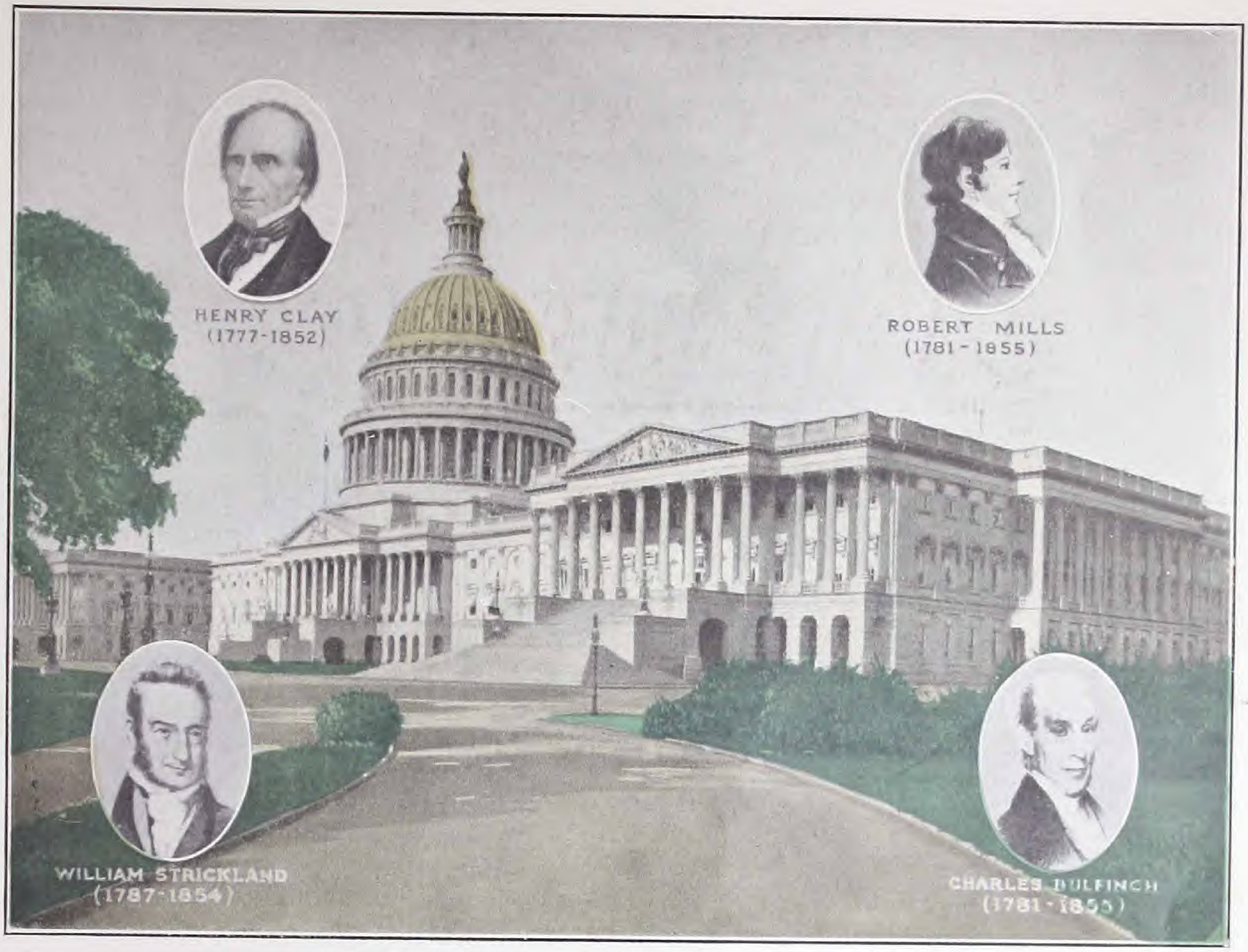
Has met all requirements wherever used and has given uniform satisfaction. Absolutely NO FAILURES.

Is fully guaranteed to produce satisfactory results.

SUCCESSFULLY USED IN

Armories
Auditoriums
Ball Rooms
Banking Rooms
Banquet Halls
Churches
Corridors
Court Rooms
Dining Rooms
Halls
Hospitals
Lecture Rooms
Libraries
Lodge Rooms
Music Rooms
Offices
Reading Rooms
Restaurants
School Rooms
Temples
Theatres
Etc. Etc.

MAZER ACOUSTILE COMPANY
Established 1909
ACOUSTICAL ENGINEERS AND CONTRACTORS
Sole manufacturers under Jacob Mazer Patents
525-529 Third Avenue
PITTSBURGH, PA.



UNITED STATES CAPITOL BUILDING

I. PRINCIPLES OF ACOUSTICS KNOWN TO OUR FOREFATHERS

A few years ago in Washington, while engaged in the examination of the present Hall of the House of Representatives for the Government, with a view of improving its acoustical properties, we found some most interesting congressional reports on experiments conducted in the then Hall of the House, now Statuary Hall, for the purpose of correcting its acoustical defects. These reports show that the Old Hall has been the subject of repeated investigations and reports by some of the most eminent architects and authorities on acoustics in this country. In 1820, in the Sixteenth Congress, that body passed a resolution instructing the Committee on Public Buildings "to inquire into the practicability of making such alterations in the present structure of the Hall of the House of Representatives, as shall better adapt it to the purposes of a deliberative assembly." Charles Bulfinch, a famous architect, was engaged to make this investigation. His recommendations called for an expenditure of $5,000, but Congress could not spare this small amount. It was shortly after the war of 1812, and money was scarce in the young Republic, just recuperating from the ravages on its commerce.

Seven years later, in 1827, a Committee of the House, of which Henry Clay was Chairman, made a report on the acoustics to Speaker John W. Taylor, in which William Strickland, of Philadelphia, architect and engineer, gave it as his opinion that caissons or panels should be placed in the dome. Similar recommendations were made by Architect Robert Mills in 1832, and later, in 1850, were elaborated upon in a more complete report, which he made to the then Committee on Public Buildings of the U. S Senate, some of which were subsequently carried out.

CANADIAN PARLIAMENT BUILDINGS, OTTAWA, CANADA

From the Montreal (Canada) GAZETTE—

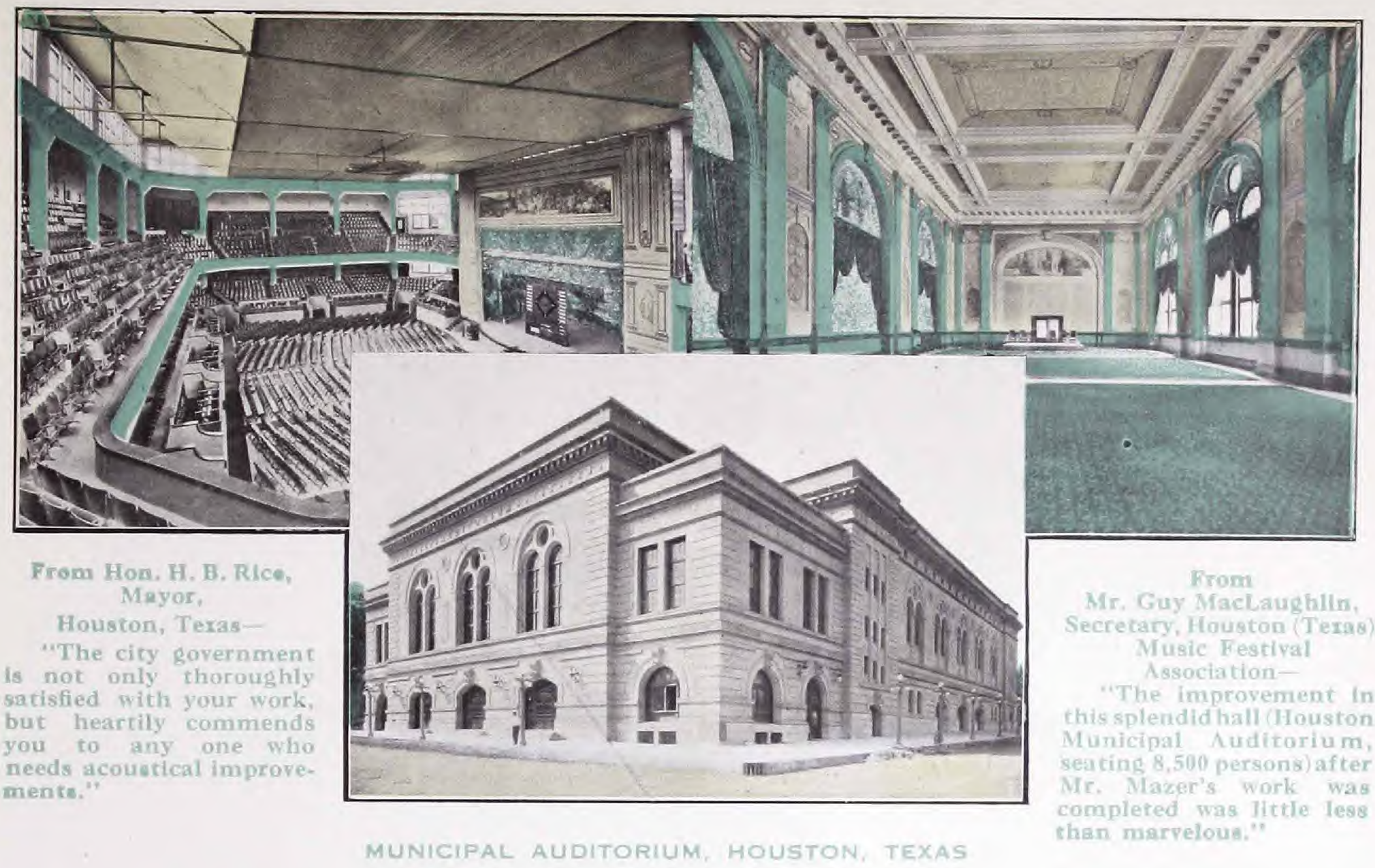
"The acoustic qualities of the House of Commons (Ottawa) Chamber have been notoriously bad. Jacob Mazer, an expert acoustical engineer, has been working on the Chamber all summer. The tests show there are none of the old reverberations, and lowered tones can be heard distinctly at the farthest corners."

It will be seen that these men, who were so closely identified with the early history of our country's development, were more than ordinarily familiar with the subject of architectural acoustics. From their attempts to correct acoustical defects by introducing various absorbing materials, and by reducing the volume of the rooms, it is evident that they understood fully the principles of sound control. Early Congressional Records, containing their technical reports, attest to this fact; but, on account of inaccessibility to these records, other modern experimentors, who merely measured and tabulated the absorbing power of different materials, have been erroneously credited with first discovering the very elementary principles of the behavior of sound which governed these earlier efforts.

II. ACOUSTICS IN ANCIENT GREEK AND IN MODERN AUDITORIUMS

Twenty-five hundred years ago, Demosthenes spoke to 30,000 people seated in a Greek Auditorium located at the foot of the Acropolis at Athens, and they heard every syllable clearly and distinctly, without annoying reverberation. In such auditoriums Draco gave his laws to the Athenians, Solon introduced his constitution and delivered his famous orations, and Aristides and Themistocles stirred the Athenians to their wonderful achievements during the Persian wars.

Why were these Greek auditoriums excellent without exception in their acoustical properties and why are so many of our modern auditoriums so lamentably defective in their conditions for hearing?



From Hon. H. B. Rice,
Mayor,
Houston, Texas—

"The city government is not only thoroughly satisfied with your work, but heartily commends you to any one who needs acoustical improvements."

From
Mr. Guy MacLaughlin,
Secretary, Houston (Texas)
Music Festival
Association—

"The improvement in this splendid hall (Houston Municipal Auditorium, seating 8,500 persons) after Mr. Mazer's work was completed was little less than marvelous."

MUNICIPAL AUDITORIUM, HOUSTON, TEXAS

The Greek auditoriums were all of the same type, open to the skies, and their seats were arranged in semi-circular rows one above the other. They had neither walls nor ceiling, thus permitting all sound which did not strike the audience to escape freely to the heavens. The result of this was that no excess sound remained to overlap and interfere with the subsequent syllables uttered by the speaker.

In our modern closed auditoriums, the sound which does not strike the audience direct cannot escape. Instead, it is repeatedly deflected from surface to surface, and this process continues for a long time before the audience ceases to hear it. In some auditoriums this residual sound continues as long as 9 seconds. Such a condition prevails in most of our auditoriums, always producing an overlapping of sounds and indistinctness in hearing. In other words, most of them are acoustically bad.

III. BAD ACOUSTICS ANALYZED

THE ESSENTIAL PROBLEM

The study of the acoustics of auditoriums includes varied phenomena, such as refraction, diffraction, reflection, absorption, interference, resonance and transmission. As the difficulty in most auditoriums is due mainly to an improper amount of reverberation, the problem of correcting bad acoustics, or of providing for proper acoustics during construction, is confined chiefly to a study of the phenomena of reflection and absorption as they relate to the reverberation of an auditorium.

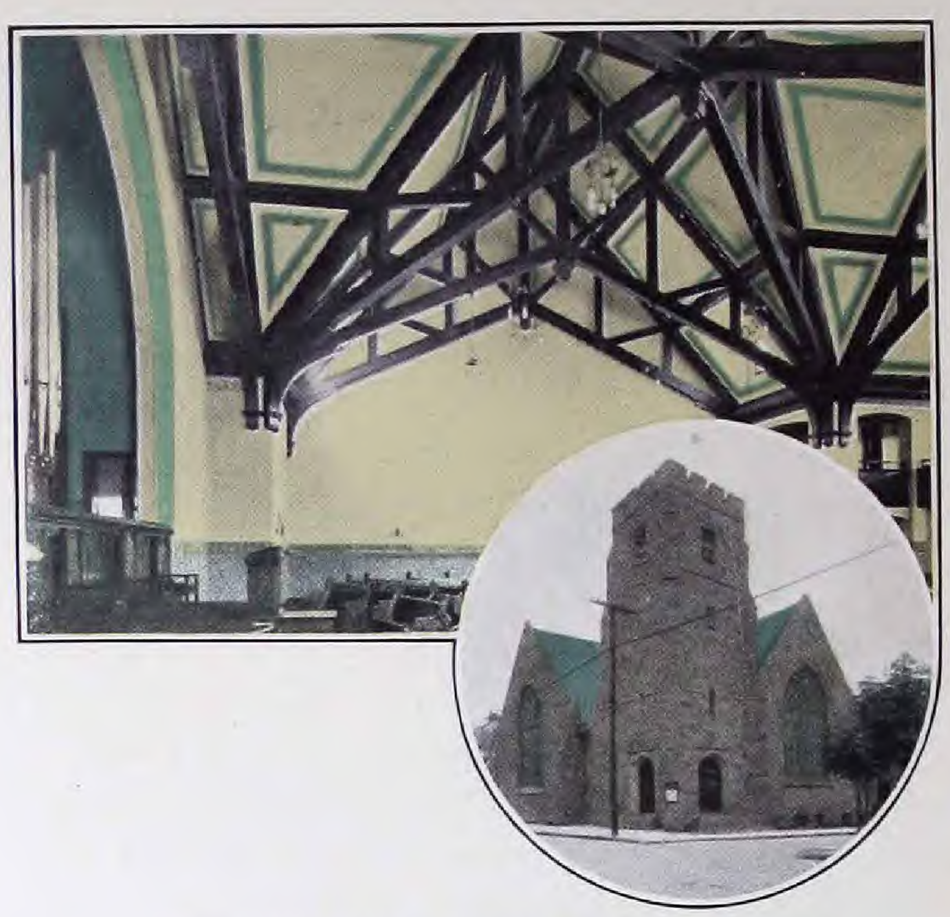
EXCEPTION: CANADIAN COMMONS CHAMBER

There are, however, notable exceptions to the common fault. One of these exceptions was the House of Commons Chamber, in the Dominion Parliament Building at Ottawa, Canada, which we were called upon to correct by the Canadian Government. This room was very close to the time of reverberation it should have, but due to the improper position of the absorbing and reflecting surfaces in the Chamber, the distribution of the sound was very poor. The surfaces near the speaker absorbed the sound, instead of deflecting it to the

From Rev. C. G. Jordan, Pastor,
Second Presbyterian Church, Wilkinsburg, Pa.—

"The acoustics of the Second Presbyterian Church, Wilkinsburg, Pa., were the worst ever encountered by me in any building. As it was, the church was doomed. The acoustics are today as good as any speaker could desire. You did the work that gave the favorable conditions."

audience. The distant walls were highly reflecting and acted to return the sound that reached them, after a long period of time had elapsed. By reversing the nature of the surfaces mentioned, namely, increasing the reflecting power of the walls near the speaker, and greatly decreasing the reflecting power of the walls distant from the speaker, in the main body of the Chamber, the room was rendered excellent in its condition for hearing without in any way marring its beauty or general appearance.



SECOND PRESBYTERIAN CHURCH,
WILKINSBURG, PA.

WHISPERING GALLERIES

Certain phenomena, due to the concentration of sound in spots, are of somewhat common occurrence, and have often been mistaken for indications of good acoustics. Rooms where this occurs are known as "whispering galleries," because a whisper or other faint sound produced at a particular point is heard distinctly at some different part of the building. This is due to one of two causes: first, the walls of the room may be either elliptical or circular in form, and hence act like concave mirrors in converging all of the sound waves to one point; or secondly, the sound may be reflected repeatedly from point to point, and thus be made to travel around the walls. This is the case with long circular passage ways, which are somewhat like speaking tubes.

STANLEY PRESBYTERIAN CHURCH,
MONTREAL, CANADA

From
Messrs. Hutchison, Wood & Miller, Architects,
Montreal, Canada—

"With reference to the work on the Stanley Presbyterian Church, would say this building is now complete and occupied. Great satisfaction has been expressed by all who have visited the building at the wonderful acoustical results obtained. As Architects for the building it is a great satisfaction for us to co-operate with our work your knowledge of acoustics, as we can, from our several associations with you in this respect, feel sure that this end of the work will be entirely satisfactory to our clients."

Acoustile
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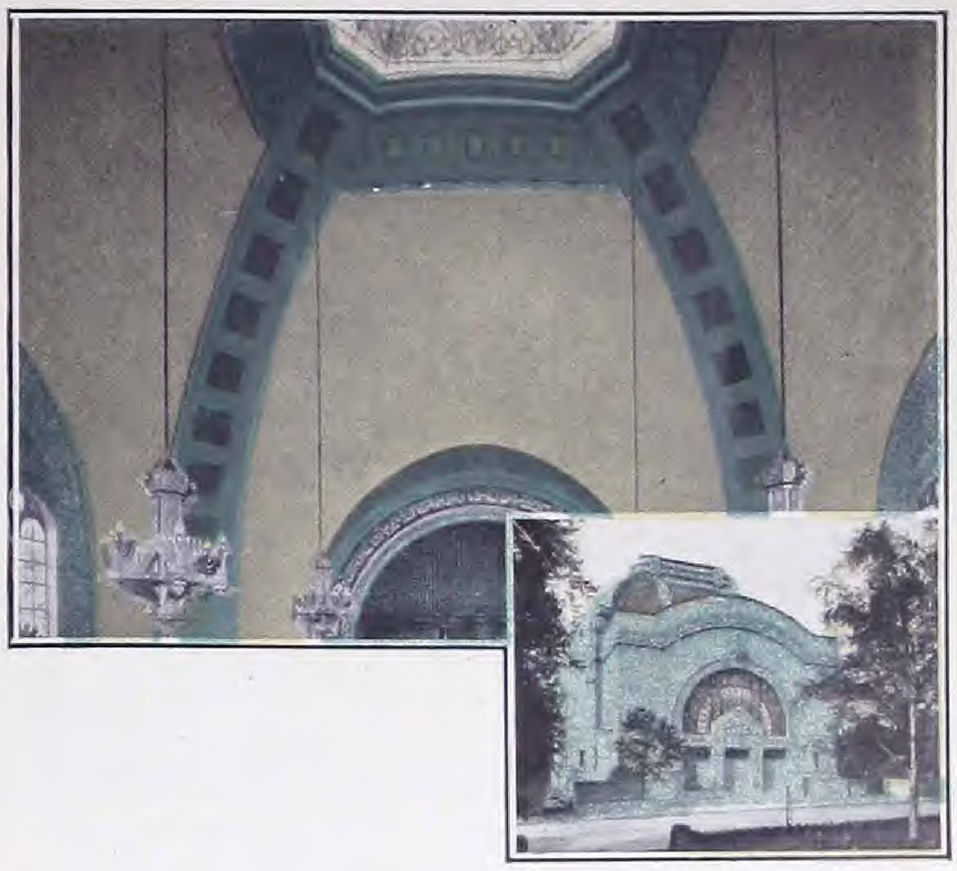
From Rabbi J. Leonard Levy,

Rodef Shalom Temple, Pittsburgh, Pa.—

"It was for two whole seasons a source of discomfort to my congregation and myself to attend and to conduct the services in the large auditorium, because of the disturbance caused by the annoying reverberations and echo. It is a joy to the congregation and to myself to be able to bear testimony to the present eminently satisfactory acoustic properties of the Temple, a feat achieved by the adoption of your methods of curing such defects."



TEMPLE RODEF SHALOM,
PITTSBURGH, PA.

ECHO AND REVERBERATION Bad acoustics are chiefly due to excess reverberation and echoes, caused by the sound waves continuing in the room for several seconds after the source of the sound has ceased. Reverberation is closely related to the generally known phenomenon of echo. An echo is caused by the reflection of sound at some suitable surface, such as the face of a cliff, a mountain side, or, as in a room, at the walls and ceiling. The reflection may even take place, as in the case of thunder, at the surface of a current of hot or cold air. To be heard as an echo, the reflection of a sound must reach the ear at least one-tenth of a second after the initial sound has left the ear. This is because of the physiological fact that the sensation of hearing a sound continues for about a tenth of a second after the sound wave has ceased to act upon the ear. When a sound is reflected from several surfaces, a number of different echoes of the same sound may be heard, and if these follow one another at very short intervals, they have the effect of prolonging a short sound into a long roll or rumble. The roll of thunder is due to multiple reflection. In nearly all large auditoriums this phenomenon of a multiple of echoes is very prominent. The reflections follow one another so rapidly and immediately after the initial sound, that the ear cannot distinguish them as separate sounds, and we hear them as a prolonged or continuous sound, which we call reverberation. In large rooms we often hear one or more echoes for some sounds in addition to the reverberation, for the reverberation varies with the pitch and intensity of the sound that produces it.

TEMPLE BETH ZION,
BUFFALO, N. Y.

From Rabbi Israel Aaron,

Temple Beth Zion, Buffalo, N. Y.—

"I offer you my heartiest congratulations, not only on your successful accomplishment in the Temple Beth Zion, but on a discovery which will correct the great defect of many a beautiful auditorium."

Acoustile
THE PERFECTOR OF ACOUSTICS

From Rabbi David Philipson,

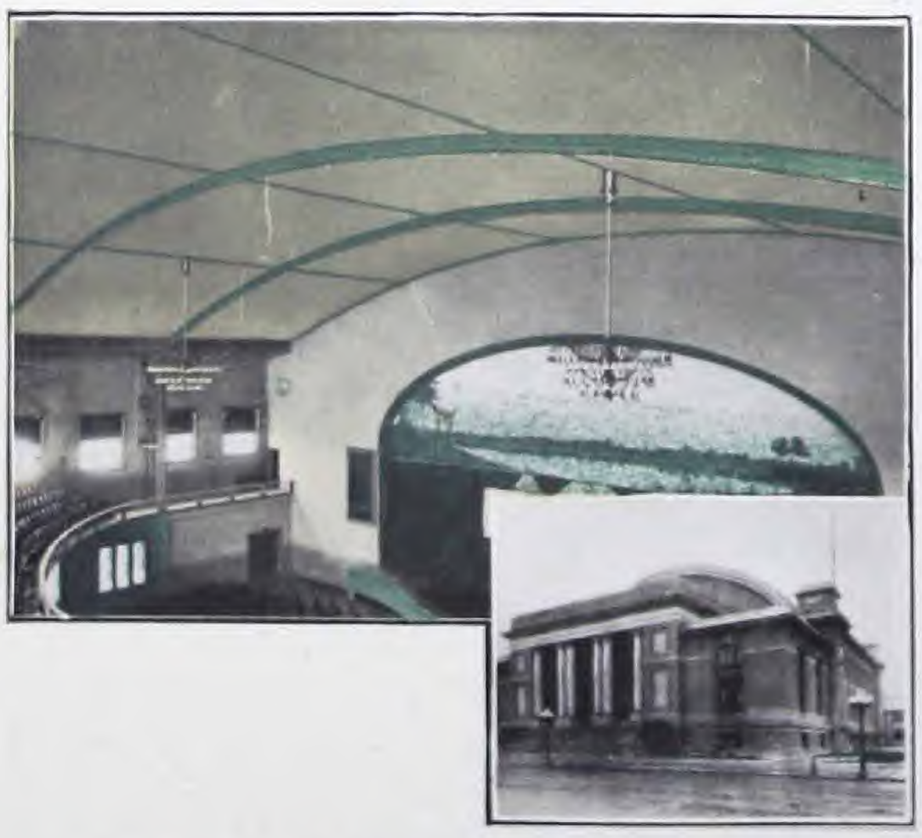
Temple Bene Israel, Cincinnati, Ohio—

"You have achieved remarkable results. I am told by members of the congregation who had difficulty formerly in understanding what was spoken from the pulpit that they now hear every word without strain or effort on their part."

TEMPLE BENE ISRAEL,
CINCINNATI, OHIO

CORRECT TIME OF REVERBERATION ESSENTIAL

For a listener to hear distinctly, each syllable of the speaker must disappear entirely before the arrival of the next syllable. When the reverberation, which is due to the reflecting power of the walls, ceiling and other surfaces in the room, continues too long, it produces confusion and indistinctness. A room may also be defective on account of an insufficient amount of reverberation, for some reverberation is essential to the production of sufficient volume. With too little reverberation, the sound disappears almost immediately after leaving the speaker, and is so feeble that only those close to him can hear it. Therefore, it is necessary, for good acoustics, to produce a condition that will neither give too much nor too little reverberation. In the average acoustically bad auditorium, the reverberation usually continues to be heard for periods varying from four to seven seconds, and as the average speaker utters about four syllables per second, there is much overlapping of sounds and consequent confusion in hearing. The obvious remedy for this excess of reverberation is to cut down the duration of audibility, and that is exactly what is done in correcting a room having this defect. The time to which the reverberation should be reduced is very important; it varies for different auditoriums, and for good results must be exact to within a few hundredths of a second.



SOLDIERS MEMORIAL BUILDING,
DAYTON, OHIO

From the committee of citizens appointed to test the results of our work in Dayton, Ohio, Memorial Hall, seating 3,500 persons, consisting of:

Mr. J. C. Hale, Mgr., Welfare Depart., National Cash Register Co.

Mr. Edward B. Grimes, Author and Vice President of Dayton Chamber of Commerce.

Rev. Henry J. Becker, Pastor, Patterson Memorial Presbyterian Church.

Rev. David Lefkowitz, Rabbi, K. K. B'nai Yeshuran.

Rev. Charles S. Kemper, Pastor, St. Mary's Church, R. C.

Mr. Fred W. Fansher, Secretary, Dayton Chamber of Commerce.—

"The committee congratulates the community and the County Commissioners on the successful completion of an improvement that was so greatly needed."

Board of County Commissioners,
Fayette Co., Uniontown, Pa.—

"This board feels that you are entitled to the highest commendation for your work of correcting the bad acoustics of our court room."

FAYETTE COUNTY COURT HOUSE
UNIONTOWN, PA.

IV.

PROGRESS IN PRACTICAL ACOUSTICS

A sound is heard because the wave of motion set up by the source of sound in the surrounding air travels from the source to the ear, through the intervening air, and by its incidence on the drum of the ear, produces the sensation of hearing. Sound travels by this wave of motion at the rate of about 1,120 feet per second. It does not travel from the source like a bullet from a gun, but spreads in all directions, similar to the wave produced by dropping a stone in still water. This spherical sound wave continues to get larger and larger as the distance from the source increases, until it strikes the walls and other surfaces in the room. Then it is deflected at angles which are equal to the angles with which it met the surfaces.

In an auditorium, this deflection of sound is multiplied and continues from surface to surface, just as a billard ball is deflected from cushion to cushion, until all the energy is consumed.

Every square foot of surface in a room, whether it be wood, plaster, stone, glass, carpet, or audience, absorbs a small amount of sound each time there is an impact of the sound wave, and reflects the balance of it. These impacts are very frequent even in large auditoriums. In smaller auditoriums they are often as high as 700 per second, depending, of course, upon the shape and volume of the room. By use of the known quantities, such as the dimensions of a room, and the amount of sound that is consumed every time the sound wave strikes one square foot of plaster, one square foot of wood, or of any other material in the room, (values which we know in exact figures, or can find out by testing when we do not know), it is possible to com-

SEDGWICK COUNTY COURT HOUSE.
WICHITA, KANS.

From Hon. Thornton W. Sargent, Judge,
Wichita, Kansas—

"Since the completion of your work I have been able to hear the attorneys and the testimony of witnesses very well, and the jurors have not requested the witnesses to repeat their testimony because of their inability to hear it, and there has been no delay in the work of the court on account of bad acoustic properties of the court room."

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THE PERFECTOR OF ACOUSTICS

LUCAS COUNTY COURT HOUSE,
TOLEDO, OHIO

From Hon. Byron F. Ritchie, Presiding Judge,
Toledo, Ohio—

"Before your work of improvement was done, I was compelled, each week, to call upon an aurist to repair increasing defects in my hearing. I have had no occasion so to do since. My information is that my associates upon the bench are equally satisfied with your work upon their respective court rooms.

"I congratulate, thank and cheerfully recommend you."

BUNCOMBE COUNTY COURT HOUSE,
ASHEVILLE, N. C.

From Board of County Commissioners,
Buncombe Co., Asheville, N. C.—

"We feel that one of the best services which we have rendered has been in procuring you to do the work of curing the accoustical defects in our court room."

pute the time any sound will continue in a room and to calculate the amount and location of the treatment that will be required to reduce the duration of the sound to a point which will insure good hearing conditions.

Until a few years ago, it was thought the evils of defective acoustics had to be tolerated and the best made of a bad situation. In the mind of the general public, and also among many architects, the opinion still prevails that the acoustical quality of an auditorium is largely a matter of chance, and must remain so. A like opinion exists in regard to the possibility of regulation of acoustical conditions by planning in advance of construction. These erroneous impressions we wish to correct.

LAWRENCE COUNTY COURT HOUSE,
IRONTON, OHIO

From Board of County Commissioners,
Lawrence Co., Ironton, Ohio—

"In view of the ease and certainty with which court business can now be conducted, we feel that the County's money could not have been spent to better advantage."

Acoustile
THE PERFECTOR OF ACOUSTICS

Jas. H. Matthews & Co.,

Pittsburgh, Pa.—

"We desire to say that the conditions are wonderfully improved and we consider the cost of the treatment as a very good investment on our part.

Prior to your treatment, it was almost impossible to hear an ordinary conversation across a desk that we can now hear with ease."

The remedying of defective acoustics, and regulation in advance of construction, has been reduced to practice, and is a purely scientific matter with its basis in mathematics. There need be no uncertainty as to methods or results. This does not mean that all there is to know about acoustics has been learned, but that the solution of the problem has advanced far enough to make it possible to correct a defective room, and to specify in advance for a new room, so that every auditor may hear clearly and distinctly without the discomfort of annoying reverberation.

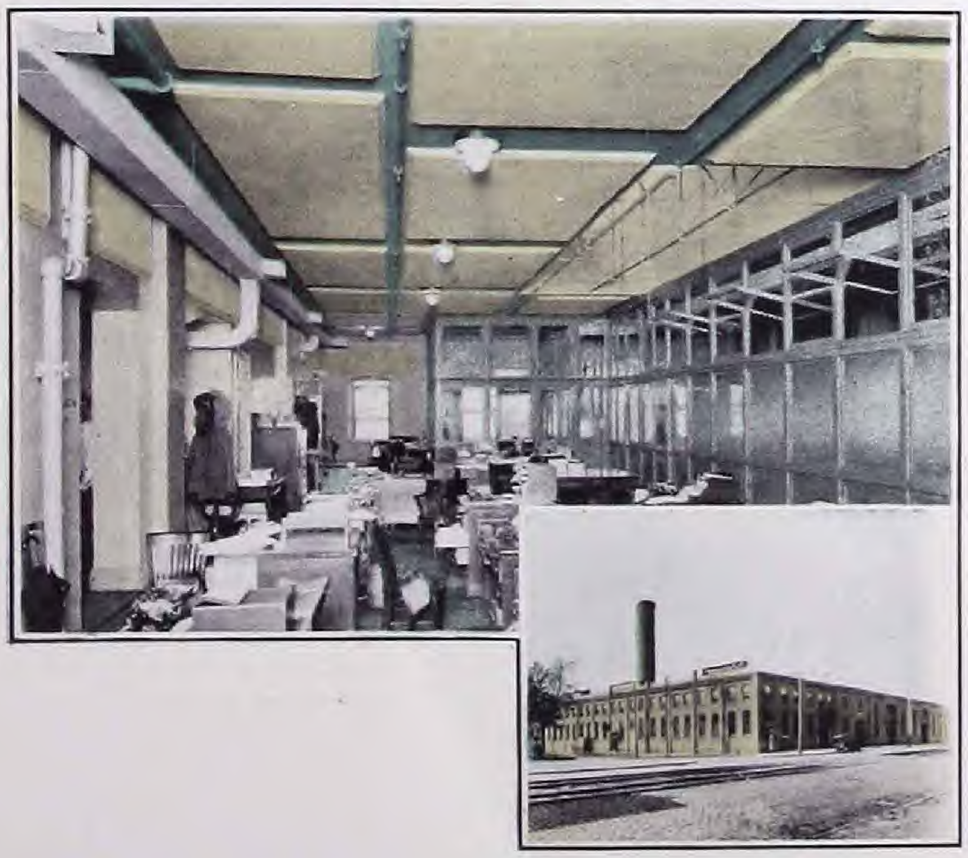
OFFICE JAS. H. MATTHEWS & CO.,
PITTSBURGH, PA.

V. OUR PRODUCT, METHOD AND SUCCESS

We are the pioneers in the practice of acoustical engineering. Prior to the year 1909, when we first established this business on a commercial basis, the very term "Acoustical Engineer" was unknown. It was first applied to our Mr. Jacob Mazer after his notable correction of the defective conditions for hearing in the Rodef Shalom Temple at Pittsburgh. The exclusive research, time and attention which we have devoted to this business is the cause of our successes and enormous growth in a comparatively few years. We shall continue to specialize exclusively in acoustical engineering.

We have been engaged for the past eight years in controlling and correcting acoustics in buildings of every description throughout the United States and Canada. We have had NO FAILURES. This is not an accident. It is due entirely to our patented system, which permits us to construct completely the several parts of our Acoustile units and to measure precisely their sound-absorbing power, in advance of application. In this way, we are enabled to prevent any change in the acoustical efficiency during installation.

We manufacture a patented, finished material, called Acoustile, which we GUARANTEE will eliminate excess reverberation, and correct noisy conditions in all kinds of rooms, corridors, etc. Acoustile is secured to the proper wall or ceiling surfaces by plastering, nailing or other suitable means, taking up a maximum space beyond the base to which it is fastened of less than two inches. Acoustile is fireproof, durable, and can be decorated either in water color or oil. We make Acoustile in units of various shapes and dimensions, as illustrated in this booklet, and can also furnish special designs where required.

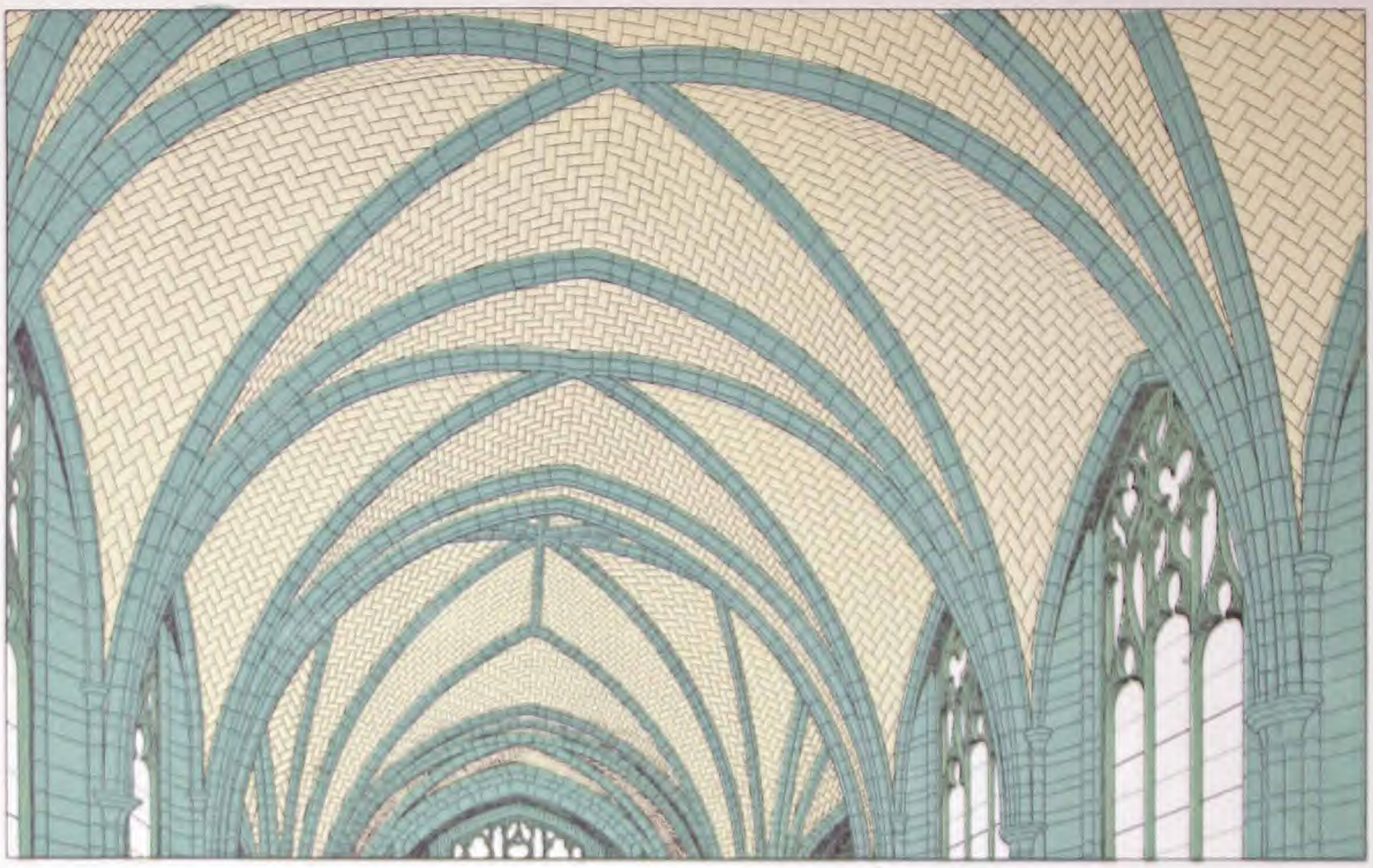


OFFICE SOUTHWARK FOUNDRY & MACHINE CO.,
PHILADELPHIA, PA.

Mr. S. M. Marshall, Chief Engineer,

Southwark Foundry & Machine Co.,
Philadelphia, Pa.—

"We find that noise in the office has materially reduced. The relief which all have obtained is very marked, and the office is unquestionably more pleasant and livable."

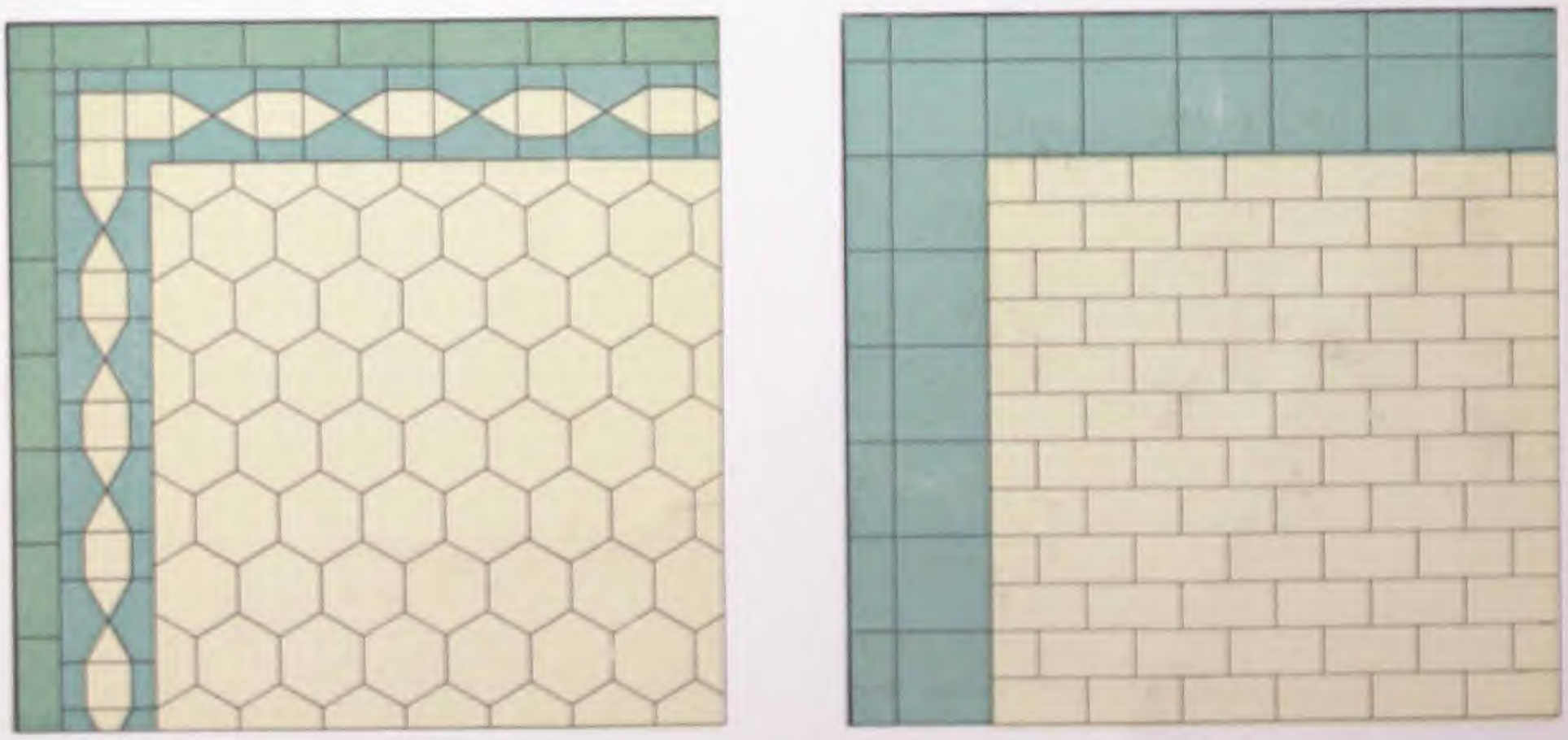


SHOWING ADAPTABILITY OF TYPE "B" ACOUSTILE TO CURVED SURFACES

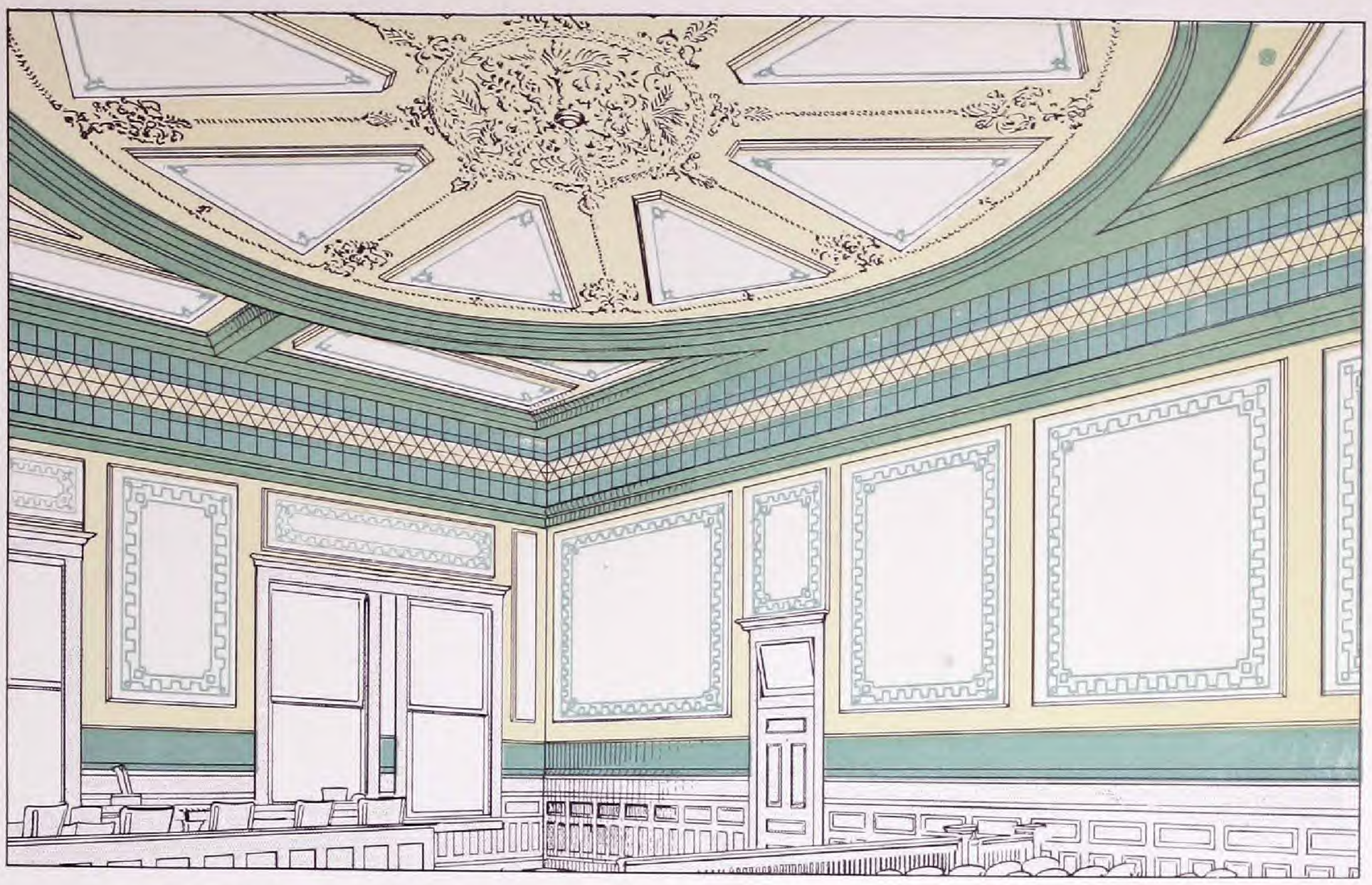
SOUND TRANSMISSION

The problems of sound transmission, and the discomfort caused by noise from extraneous sources, are greatly lessened in a room where our Acoustile treatment is applied. If the interior acoustical conditions are remedied, and excess reverberation removed, the duration and intensity of sounds entering from without the rooms are so minimized as to render their effect negligible. We have had many instances where extreme annoyance from this cause has been entirely eliminated, as evidenced by the testimony of our clients in their letters of endorsement after the completion of our work.

The sound absorbing element of Acoustile is Acoustifelt, made of animal hair, securely wire stitched to a fireproofed aircell backing. All fatty substances are extracted from the felt



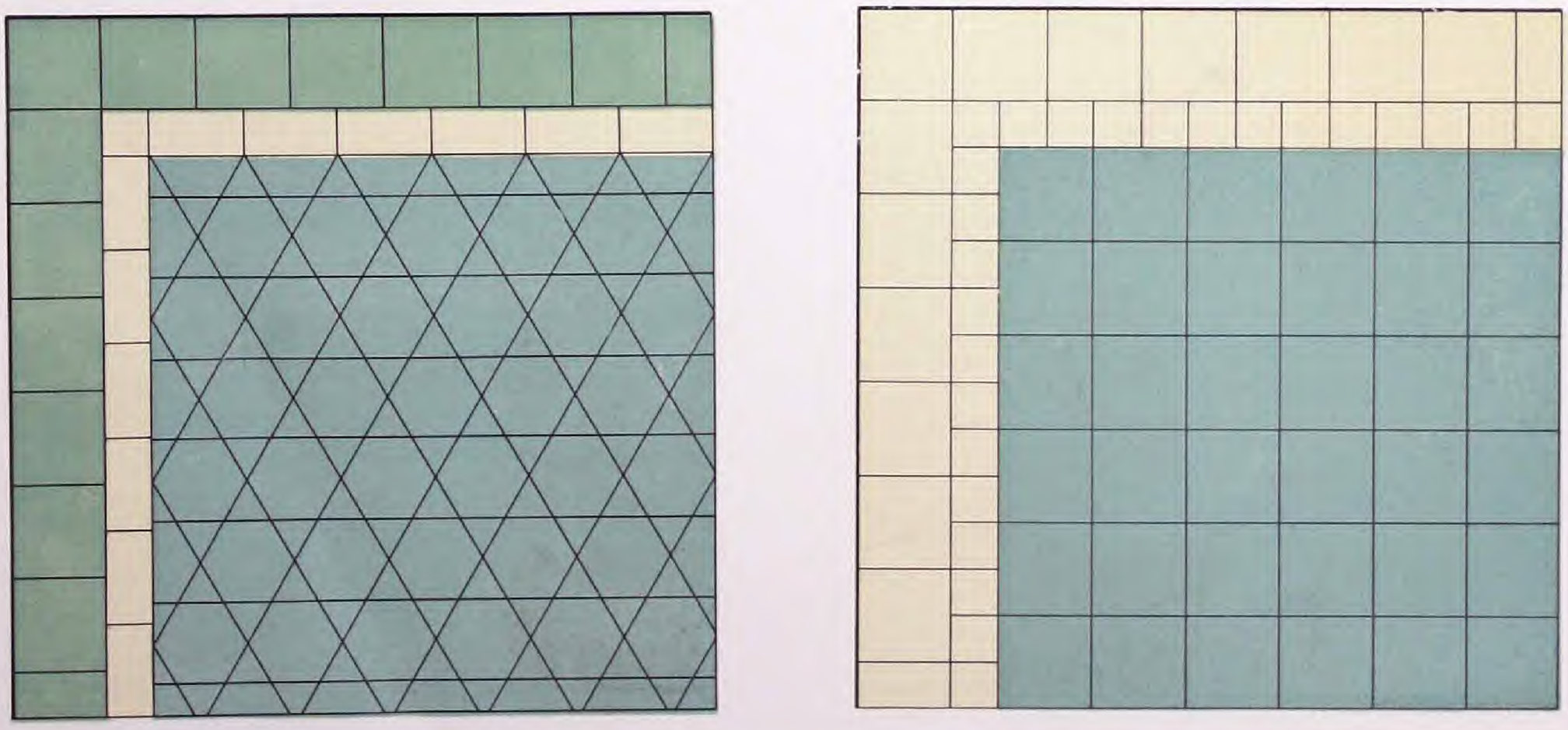
SUGGESTED ARRANGEMENTS OF TYPE "B" UNITS



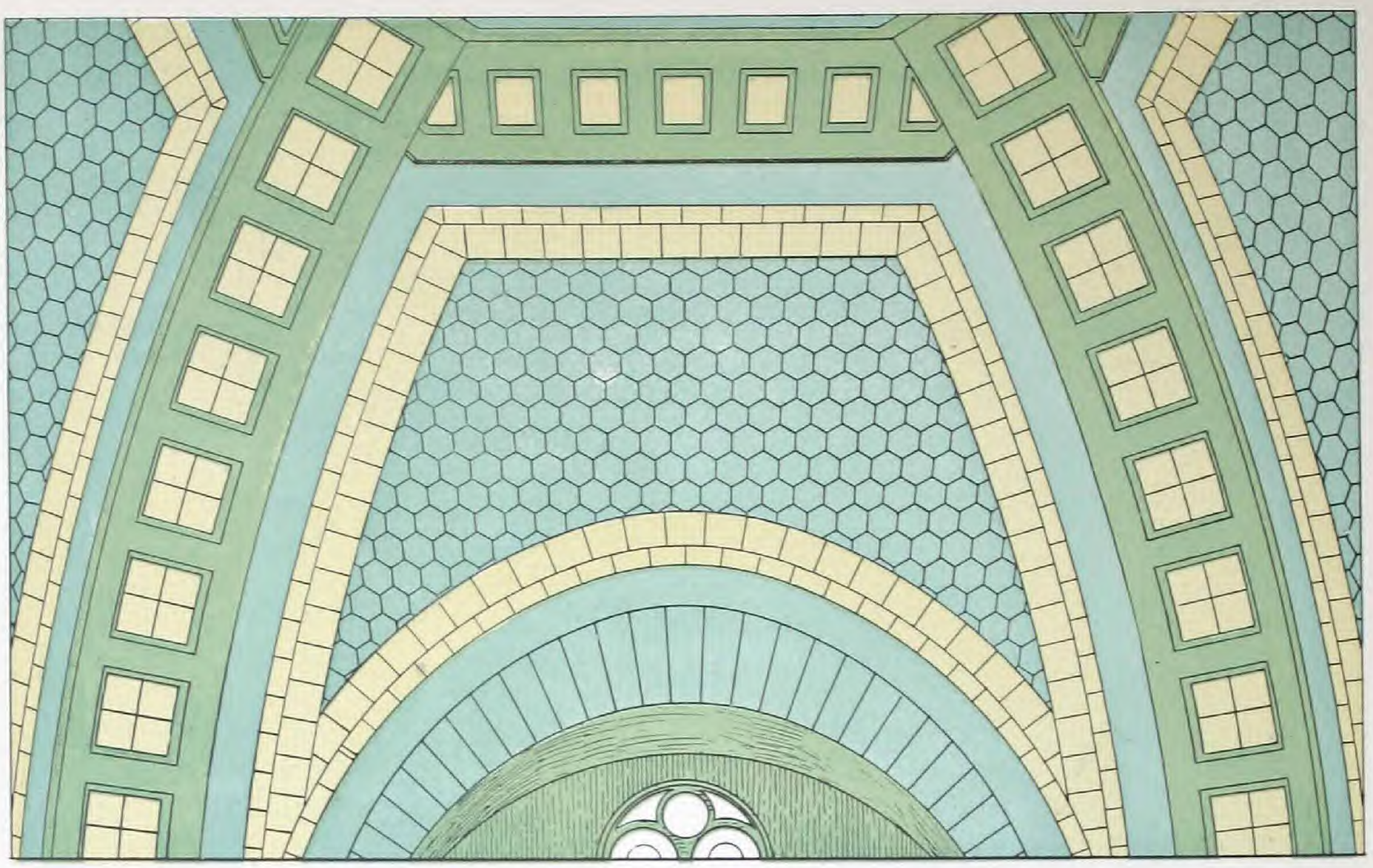
PLAIN PANELS ON WALLS AND CEILING SHOW TYPE "A" ACOUSTILE.
BORDER OF WALLS ILLUSTRATES TYPE "B" ACOUSTILE

by thorough chemical cleansing, insuring a sanitary product. Another result of this treatment is to make Acoustifelt non-inflammable. The application of a torch to Acoustifelt results in singeing that portion nearest the flame, but when the flame is taken away no fire remains. Acoustifelt will not carry flame.

Type "A" Acoustile is used for flat side wall or ceiling spaces. Type "B" Acoustile consists of small units made in various shapes and dimensions, and is especially designed for curved surfaces, or where a tile or stone effect is desired. The units are manufactured

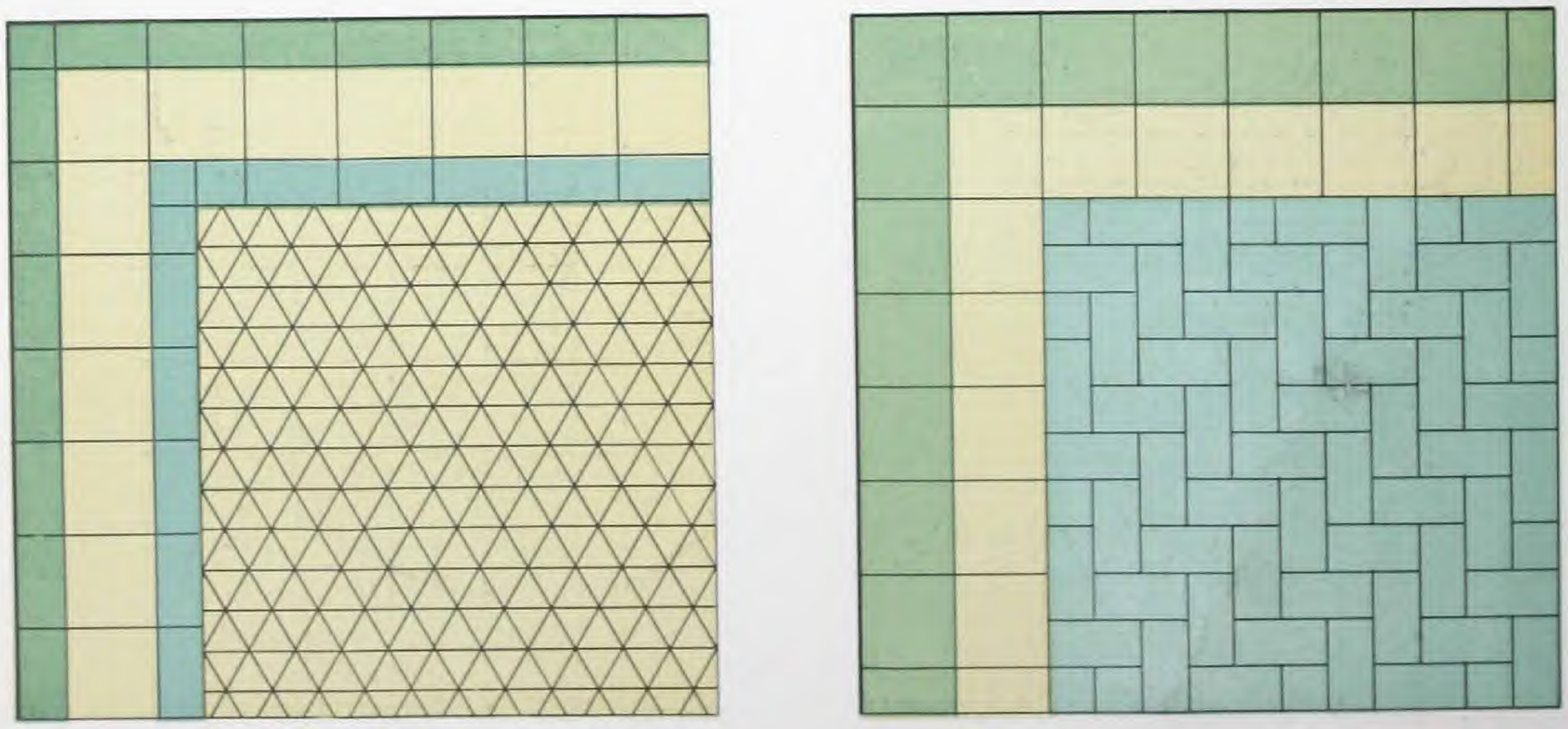


SUGGESTED ARRANGEMENTS OF TYPE "B" UNITS



SUGGESTED ARRANGEMENT OF TYPE "B" ACOUSTILE UNITS IN TEMPLE DOME

complete ready for application and can be decorated either before they are installed or afterwards, as specified. Some of the standard units of Type "B" are shown on page 16 of this booklet, and on pages 10, 11 and 12 are shown suggested arrangements of these units in panels. The combination of Type "B" Acoustile units to form various designs is practically unlimited. The average weight of Acoustile is 1½ pounds per square foot.



SUGGESTED ARRANGEMENTS OF TYPE "B" UNITS

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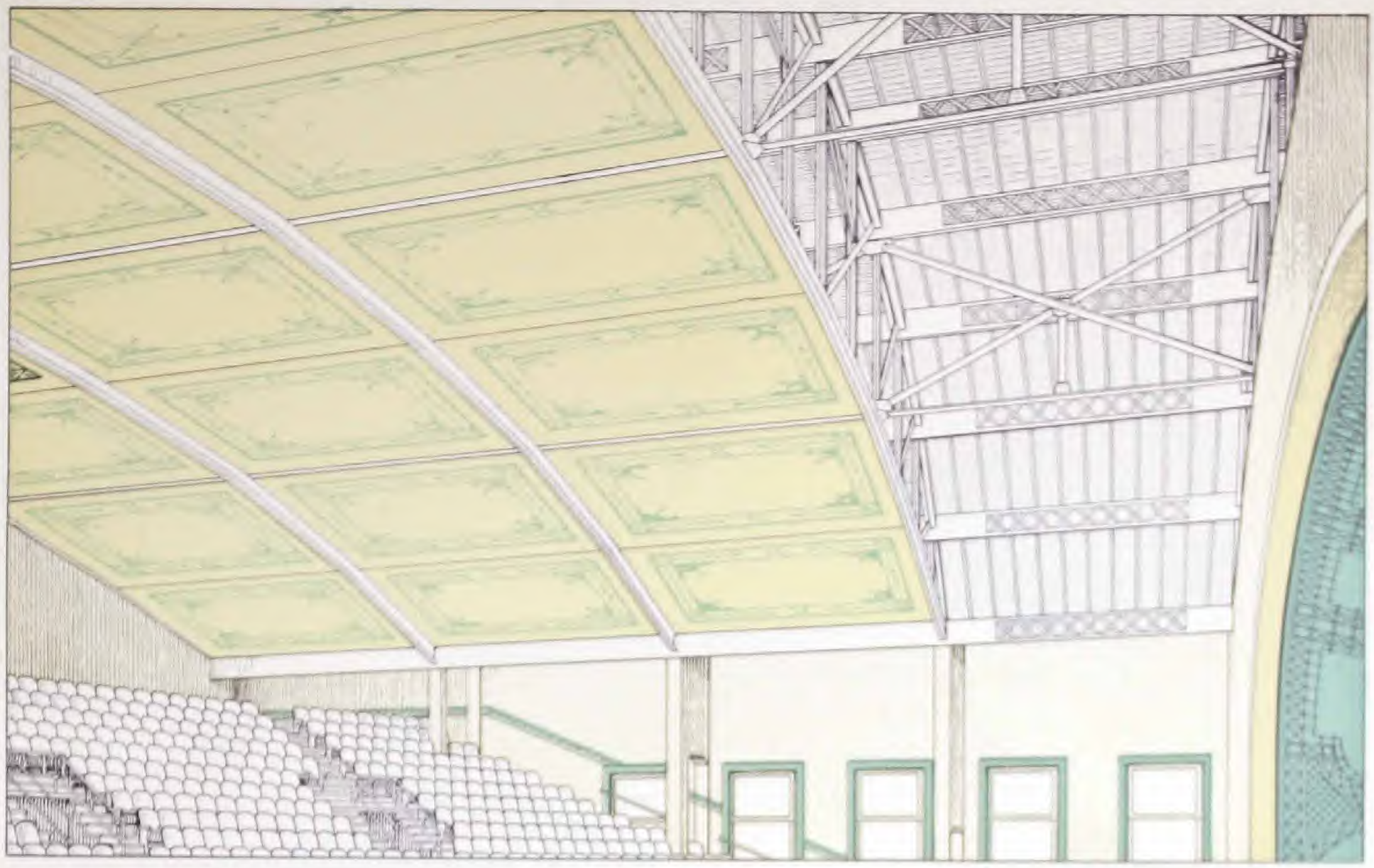
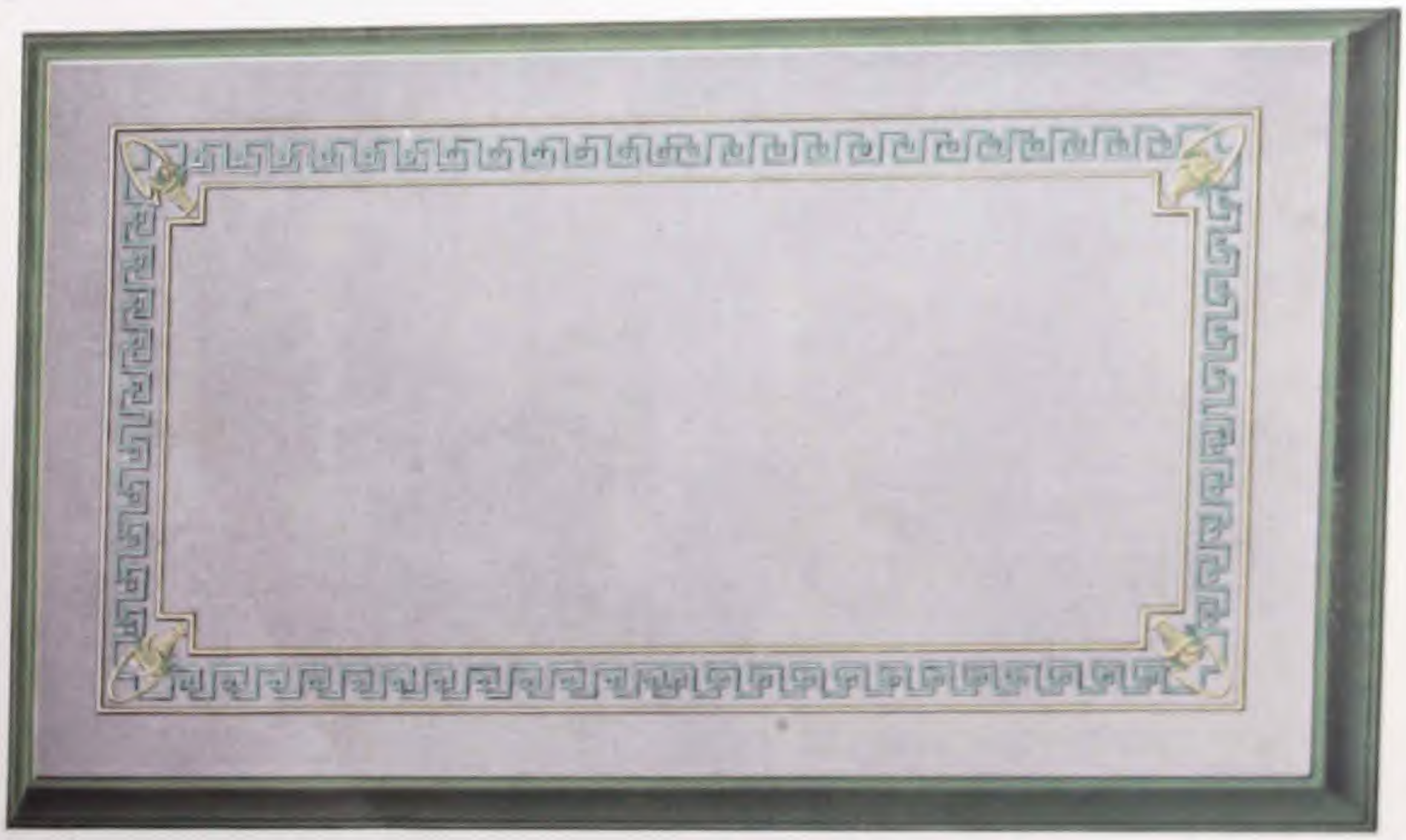


The above cut shows an auditorium wherein, as is sometimes necessary, the ceiling is lowered by applying Type "A" Acoustile panels to the face of the steel girders. Section to right of cut shows steel work not yet covered.

The cut below shows one of our Type "A" Acoustile panels, which are built complete, sized, fireproofed and decorated before erection.



WORKING DRAWING
TYPE "A" ACOUSTILE

Acoustile SOUND CONTROLLING SYSTEM

TYPE "A" FOR PLAIN SURFACES

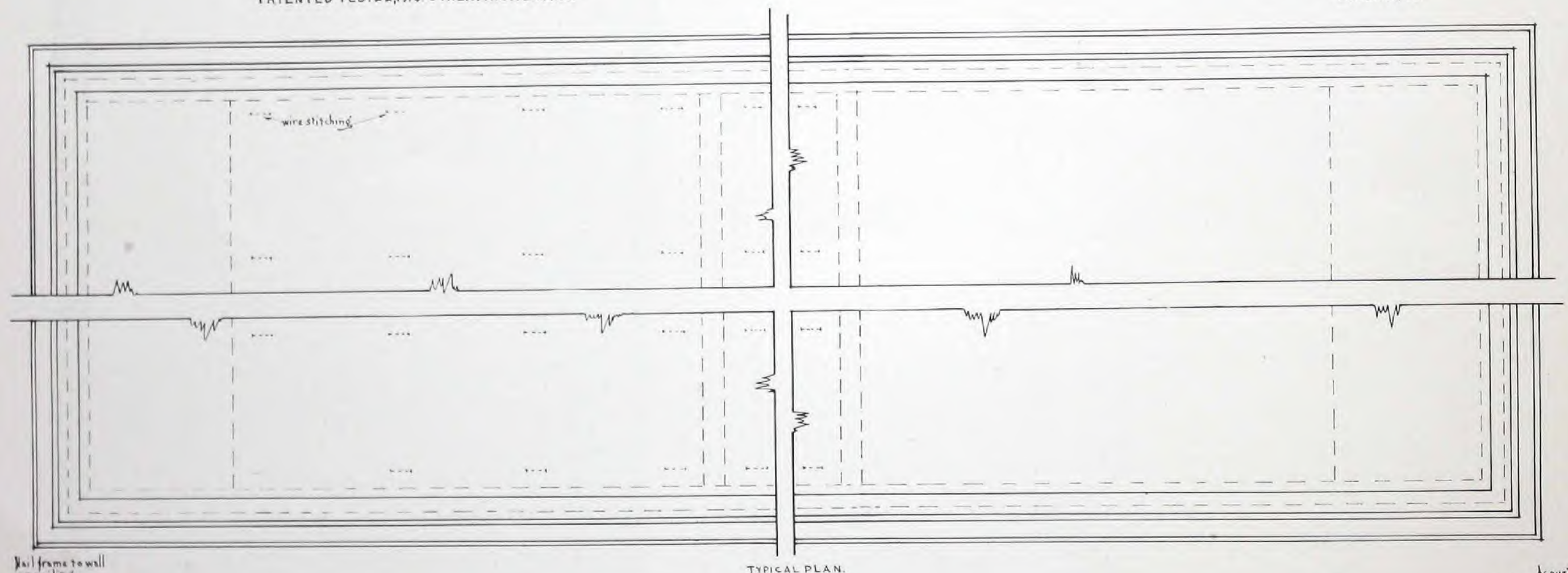
PATENTED FEB. 22, 1916. OTHER PAT'S. PENDING.

MAZER **Acoustile** COMPANY

THE PERFECTOR OF ACOUSTICS

ACOUSTICAL ENGINEERS AND CONTRACTORS

PITTSBURGH, PA.



THE DETAILS OF CONSTRUCTION OF THIS TYPE ARE VARIED DEPENDING UPON THE SIZE AND STRENGTH OF FRAME DESIRED.

Acoustile
THE PERFECTOR OF ACOUSTICS

SPECIFICATIONS

TYPE "A" ACOUSTILE FOR PLANE SURFACES

Apply to wall and ceiling spaces where indicated on drawings, and approximating..... square feet of surface, Type "A" Acoustile Patented Sound Controlling System, arranged in panels as shown, using the materials and construction described below.

PATENT LICENSE

The contractor shall procure a written license from the patentee (Mazer Acoustile Co., Pittsburgh, Pa.) to install this system, and shall guarantee protection to the owner against any liability for damages on account of infringement of patents.

MATERIALS

The materials which shall be used are as follows:

ACOUSTILE:

The sound absorbing element shall be Type "A" Acoustile.

ACOUSTIC MEMBRANE FRAME:

The acoustic membrane frame shall be constructed of white pine, poplar, spruce or hemlock strips, sound and free from knots or other imperfections impairing its strength, and of sizes and dimensions shown in detail drawings.

ACOUSTIC MEMBRANE:

The acoustic membrane shall be made of best grade fireproofed unbleached cotton sheeting, weighing about 5 oz. per square yard. Where necessary to stitch sheeting together to form larger sheets than stock widths permit, it shall be done without overlapping, and in such a way as to conceal the seams after paint is applied.

SIZING, PAINT, NAILS, ETC.:

The sizing, paint, nails, etc., used shall be as described in these specifications.

METHOD OF CONSTRUCTION

(Each operation to be performed in order given).

FIRST. Build the acoustic membrane frames for various panels indicated on drawings, on the ground complete, with all parts firmly nailed together. Outside edge strips shall be mitred at corners. Each frame shall be inspected and approved by the Architect before being installed.

SECOND. Place the completed frame against the wall or ceiling surface to be covered and mark outline of spaces between strips where Acoustile is to be applied.

THIRD. Lay the frame on the ground and cover with acoustic membrane, starting the stretching of fabric at the center of sides, and proceed by stretching and tacking towards the corners of frame. Tack membrane fabric to the side face of edge strips only, at point indicated on drawing. Tacks shall be spaced not more than 1" on centers. Special attention shall be given to make neat corners.

FOURTH. Cover the spaces previously outlined, as directed above, with standard 1" Acoustifelt, permanently secured to wall or ceiling surface with plaster, moisture-resisting glue or cement. Where nailing pieces are provided, or where the surface covered will permit of nails being driven, the Acoustile shall be nailed at intervals of about 12" on centers, using large head American felt roofing nails, having ½" flat head and barbed shank ⅛" in diameter and 1" long.

FIFTH. Place the acoustic membrane frame in proper position on wall or ceiling, and fasten securely by nailing or bolting through the membrane and outer edge strip, as shown on drawings. Nails or bolts should be slightly countersunk, and the holes carefully concealed with putty or molding (nailing or bolting through outer edge strip may be omitted, if desired, and special steel angle supports, spaced about 3' apart, may be used instead, the same being screwed or nailed to outer side of finished panel and to wall or ceiling surface).

SIXTH. Apply to acoustic membrane one coat of Acoustile System Membrane Fireproofing and Sizing Compound, and allow to thoroughly dry before painting. (A sufficient quantity of this Compound is furnished to purchasers of Acoustile, upon request, without extra charge, by the Mazer Acoustile Co., Pittsburgh, Pa.).

SEVENTH. Place a wood or plaster molding around all panels, as shown on drawings.

EIGHTH. (For Water Color Surface). After sizing has dried, shellac molding and paint acoustic membrane and molding, in colors approved by Architect.

(For Flat Washable Surface—1 coat). After sizing has dried, shellac molding and paint acoustic membrane and molding, in colors approved by Architect, with one coat of Acoustile System Flat Washable Mixture, the formula for which is as follows: Use a flat wall paint of lithopone base thinned with turpentine to the proper consistency for easy brushing. (Use no oil).

(For Gloss Washable Surface—1 coat). For gloss surface, add to the above formula for "Flat Washable Surface" 1 pint of boiled linseed oil to each gallon of mixture.

(For Glazed Washable Surface—2 coats). For glazed surface, proceed as above for "Flat Washable Surface," and after this is dry apply a second coat composed of the following mixture:

3 parts Turpentine.
1 part Raw Linseed Oil.
½ part Japan Drier.
½ part Sizing Varnish.

Add to this the color desired, and stipple with brush or cheesecloth as soon as applied. The method of stippling will control the final decorative effect produced.

Acoustile
THE PERFECTION OF ACOUSTICS

3" X 6"

6" X 6"

6" X 12"

12" X 12"

TRIANGLE - 6" SIDE

HEXAGON - 6" SIDE

SPECIFICATIONS

TYPE "B" ACOUSTILE

Small Unit Divisions Especially Designed for Curved Surfaces

Apply to wall and ceiling spaces where indicated on drawings, and approximating ..... square feet of surface, Acoustile Patented Sound Controlling System, arranging the various units in panel designs shown on detail drawings.

Each Acoustile unit shall be fastened to the foundation surface by means of special side-grip metal nailing pieces (furnished by Mazer Acoustile Co.), or by glue or plaster, carefully keyed into the back of unit, and the unit pressed tightly against the wall or ceiling surface until firmly and permanently secured thereto. The units, when applied, shall present a neat, smooth and uniform appearance.

Where the face of Acoustile, when applied, is higher than the surrounding surfaces immediately adjacent thereto, a finishing wood or plaster molding shall be placed around the panel as shown on drawings.

(For Water Color Surface). After Acoustile units and moldings are applied, shellac moldings and paint acoustic membrance and moldings in colors approved by Architect.

(For Flat Washable Surface—1 coat). After Acoustile units and moldings are applied, shellac moldings and paint acoustic membrane and moldings in colors approved by Architect with one coat of Acoustile System Flat Washable Mixture, the formula for which is as follows: Use a flat wall paint of lithopone base, thinned with turpentine to the proper consistency for easy brushing. (Use no oil).

(For Gloss Washable Surface—1 coat). For gloss surface, add to the above formula for "Flat Washable Surface" 1 pint of boiled linseed oil to each gallon of mixture.

(For Glazed Washable Surface—2 coats). For glazed surface, proceed as above for "Flat Washable Surface," and after this is dry apply a second coat composed of the following mixture:

3 parts Turpentine.
1 part Raw Linseed Oil.
½ part Japan Drier.
½ part Sizing Varnish.

Add to this the color desired, and stipple with brush or cheesecloth as soon as applied. The method of stippling will control the final decorative effect produced.

(For Plane Surfaces, where small unit divisions are not desired, use TYPE "A" Acoustile. Specifications and Working Drawings furnished on request).

FOR PROPOSED BUILDINGS.

Send us preliminary plans and sketches showing dimensions and general designs and character of interior surfaces.

FOR CORRECTION OF DEFECTS IN EXISTING BUILDINGS

Send us plans or sketches showing dimensions and shape of room, and indicate character of wall, ceiling and floor surfaces, and all other exposed materials in room, such as furniture, draperies, floor coverings, etc. Photographs showing as much as possible of the interior will be helpful. Our representative will visit the building, if necessary.

We maintain an expert engineering department, which is entirely at your service without charge. We will recommend proper surfaces to treat, in order to obtain the best acoustical results, and GUARANTEE SATISFACTION. In the designing of your rooms you may practically disregard, so far as the acoustical effect is concerned, the questions of form, proportion, and dimensions. This permits a latitude heretofore considered impossible, where good acoustics were desired, and makes our Acoustile system of controlling conditions for hearing practically an indispensable item in building construction.

The testimonials in this booklet speak conclusively on our ability. Do not tolerate bad acoustics. We can assure you of the same degree of satisfaction it has been our pleasure to give all whom we have served. WE HAVE HAD NO FAILURES.

MAZER ACOUSTILE COMPANY

Established 1909

ACOUSTICAL ENGINEERS AND CONTRACTORS

Sole manufacturers under Jacob Mazer Patents

525-529 Third Avenue

PITTSBURGH, PA.

Acoustile

THE PERFECTOR OF ACOUSTICS

This Book Has Been Designed to Fit Your File

Preserve for Future Reference